XX. *A Memoir on the Advantages and Practicability of dividing the Stricture in Strangulated Hernia, on the outside of the Sac. With Cases and Drawings.* By C. Aston Key, Senior Surgeon to Guy's Hospital, and Lecturer on Surgery, &c. London, 1833. pp. 161.

Strangulated hernia is an accident much more rare in this country than in Europe, partly because of the facility with which the humblest of our fellow citizens obtain the necessaries and comforts of life, without that unremitted and overstrained exertion required in communities with more dense population, and partly because free air, proper exercise, and substantial food, are actually enjoyed by the poorest operatives, and even by the residents in most of our public charities; thus we are protected from many of the predisposing and exciting causes of hernia.

But this happy state of things cannot long continue. The rapid growth of our large cities, the competition among rival manufactures, the slavery of fashion and luxury on the one hand, and that of poverty and vice on the other, must speedily lessen our advantages, and every year's experience proves that hernia, in common with all the other consequences of relaxed fibre or hard labour is continually increasing in frequency.

The importance of the subject, and the very serious character of the operations occasionally required in this disease, has induced anatomists and surgeons to bestow unusual attention upon its history and treatment, so that it may be regarded with justice as one of those departments of professional investigation that approach most nearly to accuracy in principle and perfection in practice. Every fact or contrivance that may tend to improve the treatment of hernia, may therefore be considered as reflecting double lustre upon its discoverer or inventor, on account of its usefulness and its difficulty; and the work before us is not without some pretensions of this nature.

In our great centres of medical information, the cities that are the seats of universities, the general principles of practice in hernia are, we believe, well settled, and the principal addition to the stock of knowledge that the profession, in such situations, will receive from the little memoir of Mr. Key, consists chiefly in the details of a few interesting cases, and in some proposed and tested modifications of certain plans of operating already practised; but those large and highly respectable members of the profession, who have been for years removed to a distance from schools and libraries, and who are compelled to act with promptitude in cases few and far between, without the aid of extensive experience, or the means of consultation, will find the whole essay interesting as a fair investigation of a point that may be regarded as still open to discussion.

The memoir commences with a view of the alarming mortality following the old, or as it would appear from Mr. Key's statement, the more common mode of operating in strangulated hernia, that in which the sac is freely laid open and the intestine exposed. He gives a brief statement of thirteen fatal cases in the practice of Guy's Hospital, all occurring within a few years. Among them we notice several that, not to use too strong an expression, surprise us considerably; and more particularly the first case, in which no operation was performed. The

man, admitted for a venereal affection, was suddenly seized with indisposition, which on the second day assumed well-marked symptoms of ileus.

"The matter vomited became stercoraceous, *and the constipation could not be overcome by the remedies prescribed.* He died on the seventh day from the attack, without mentioning the existence of a hernia to *the apothecary* under whose treatment he was. On examination, a knuckle of the ileum, three inches in length, was found in an inguinal hernial sac, &c." p. 12.

Do such cases occur in Guy's Hospital? The remaining cases were all subjected to the peculiar operation mentioned above. In several of the patients, portions of intestine were left in the open sac for reasons that, as they are stated, are any thing but satisfactory. In one, (*Case II.*) the surgeon thought the bowel in a state approaching to gangrene, but after the death of the patient, from peritoneal inflammation, the prognosis does not appear to have been verified; in another, (*Case III.*) the operator found the intestine thickened, and suspected internal ulceration. The patient died in the same manner, and here again the autopsic examination proved him in error! Even if ulceration of the internal coat were proved to exist, would this circumstance generally warrant the permanent exposure of the part? We think not. In case seventh, the return was prevented by the distention of the abdomen. The intestine was very little changed in colour or texture. Enemata and purgatives produced copious feculent motions after the operation, but he died of local enteritis, without general peritonitis, on the second day. There is more apparent probability of the propriety or rather the necessity of the treatment in this than in the previous cases, but the experienced surgeon will feel some surprise at the impossibility of reduction in a case free from adhesion, or general intestinal disease, and permitting free evacuations to follow ordinary medicines. No attempt was made to relieve the distention by puncture.

In three of the cases the intestine was found sphacelated, and the propriety of opening the sac was therefore undeniable. In several others, the death of a portion or the whole of the strangulated fold, occurred subsequently to the reduction, and these cases would seem at first sight to militate against the propriety of dividing the stricture, and reducing the bowel without opening the sac. Our author, however, attributes these disasters to the exposure and handling of the parts after the opening of the sac. In one of the instances, the mortification is justly charged to the violence used in the reduction, and not to the peculiar nature of the operation. With one exception, the patients all fell under peritoneal inflammation.

Thus we see that of these thirteen cases, adduced in proof of the great danger resulting from the free exposure of the contents of a hernial sac, several have little bearing on the question; some, because their nature rendered that exposure absolutely necessary and perfectly proper; others, because the evils resulting from errors of practice are so combined with those depending upon the character of the operation that it is difficult to distinguish them. Yet facts enough remain to warrant the general deductions of the author, which follow at the conclusion of the series. He proves that none of these cases could have been injured by the division of the stricture without opening the sac, and that many of them would have been exposed to vastly less danger by such a procedure. He alludes to the great evils resulting in many instances from the undue

force employed in the taxis, which is generally pushed very far, before the surgeon is willing to resort to an operation so highly dangerous as that which is in common use, and thinks that the milder measures advocated in his essay, are calculated to remove the dread of the operation, and to prevent the desperate exertions often made to avoid its performance.

Mr. Key then proceeds to give us a short history of the operations for the reduction of strangulated hernia, in which the intestine is but slightly or not at all exposed. He quotes Garengeot's notice of Petit's operation for a femoral hernia, in 1712, in which he divided the stricture external to the sac, and then reduced the contents; and alludes to his after labours both in practising and defending the measure.

He next describes the two operations of Munro, and the four cases of that author, in three of which he operated in the manner of Petit, and in the fourth he was compelled to open the sac, because an unusual thickening of the neck of the sac occasioned a continuance of the stricture after the division of the tendon, by the other method.

We might congratulate ourselves upon the fact that even the errors of theory not unfrequently induce the extension of valuable practical discoveries, were it not that the passions of men, when once engaged in contention as to principles, lead them, too generally, into contemning alike the erroneous views of their antagonists, and the facts thus strangely ascertained, even after the latter have endured the test of experience. The very inaccurate notions of Munro, as to the stimulating properties of atmospheric air, led him to adopt the operation of Petit in those cases to which it is applicable, and also induced him to modify the usual method when circumstances compelled him to open the sac. Some of his opponents in the memorable debate on this subject, not content with exposing his mistakes, have condemned or decried the valuable surgical improvement founded upon them, regardless of the other and more just arguments by which it may be supported.

Mr. Key, in comparing the claims to originality of Munro and Petit, demands too much for the former writer. It is curious that he should assert, (at page 39,) that Petit advocated his peculiar method only in inguinal hernia, when the first operation of that surgeon, mentioned but ten pages before, was performed on a crural hernia! It is much more probable that Munro was the first to divide the stricture external to the sac, at the internal abdominal ring; this achievement, together with the plan more peculiarly his own, that of substituting a very narrow incision close to the seat of stricture, in the place of the former free incisions, when the opening of the sac is rendered necessary by peculiar circumstances, are a sufficient merit in themselves.

Mr. Key then notices two operations performed by Sir A. Cooper, without opening the sac; one on an inguinal hernia in 1803, the other on an umbilical hernia in 1807; also a third case of irreducible umbilical hernia, in which the same surgeon operated after the manner of Munro, by making a small orifice in the neck of the sac, into which he carried a probe-pointed bistoury, and dilated the stricture upward. After noticing the general direction of Boyer, that the sac should not be opened in large inguinal hernia, our author presents us with a glowing picture of the evils following the mode of free incision, extracted from an anonymous correspondent of the Edinburgh Journal for 1824—a

thorough disciple of Munro. We extract the first paragraph, because we have seen in one instance something that would almost warrant the description it contains, though we trust that but few practitioners in this country have witnessed precisely such a scene. We are, however, assured by Mr. Key, that "his account, though somewhat highly coloured, is true."

"The surgeon," says this correspondent, "divides the integuments by a wound several inches in length, and then proceeds by an incision of similar magnitude to lay open the sac. After the viscera thus unhallowedly exposed to the pernicious stimulus of a medium unusual to them, (viz. the atmospheric air,) have been felt, fingered, turned over, and examined *secundum artem*, the next step is to divide the stricture, which one might suppose to be the first object in view. The protruded bowels are at length reduced; but not until, in all probability, they have been brought into contact with a number of irritating substances, such as sponges applied to the wound, the fingers of the surgeon, or perhaps, even the sleeves of his coat. After all this, can it be wondered at, if abdominal inflammation comes on so often and kills the patient?" p. 43.

Certainly under such treatment there are causes enough of inflammation present, without the necessity of any irritating property in atmospheric air to determine its attack.

Mr. Key next proceeds with a very fair and candid statement of the advantages which result from avoiding the exposure of the contents of a hernial sac. In the course of his remarks he narrates several very interesting cases, and alludes to others, showing the diminished liability to peritoneal inflammation resulting from this mode of treatment, and glancing at others in which accidental hæmorrhages and other complications are productive of much less danger than would result from similar causes if the sac were opened. Then follows a statement of the objections raised against the operation of Petit, and the very able rejoinder of that author, together with a review of the opinions of some more recent surgeons. These objections are chiefly directed against the employment of the measures of Petit under certain circumstances, which even their advocates acknowledge require a different mode of treatment, but by a very common mode of reasoning the arguments against excepted cases are urged again and again against the use of the operation in all cases. The whole ground of the question is examined, and we think impartially, by our author. The peculiar instances in which it becomes necessary to open the sac are fairly stated, as are also those in which the integrity of the sac should be preserved. The pretensions of this mode of operating may be condensed into an aphorism, that were it not for the almost unaccountable opposition of some distinguished men, and the frequent resort to the old method where no symptoms appear to demand it, we should expect to see adopted as a postulate in every work on hernia. Whenever it would be desirable to effect the reduction of a hernial tumour by the taxis, *if possible*, the impossibility of the reduction by such means indicates the propriety of attempting it by the division of the stricture external to the sac. It is only when the possibility of reduction by taxis would fail in convincing the surgeon of its propriety, that the sac should be laid open.

Even in the cases in which rare accidents, such as thickening of the neck of the sac, stricture formed by omentum, bridles of adhesion, &c. render the operation advocated in this memoir ineligible, it is by no means constantly necessary to open the hernial cavity to a great extent. The only cases

invariably demanding free incisions are those in which the intestine has actually lost its vitality; in all others the operation of Monro is frequently preferable. If any further argument is necessary to convince the practitioner, that the operation of Petit has been too seldom performed, let it be remembered that the sac may be opened at any moment, if the progress of the operation developes a necessity for this measure.

The next subject which engages the attention of Mr. Key is the diagnosis of gangrene of the intestine, and his remarks are interesting, although they contribute nothing to the limited knowledge of the subject already familiar to the profession. At present, incipient gangrene cannot be detected with absolute certainty, but this is no argument against the operation of Petit for the majority of cases. There are well-marked symptoms, both local and constitutional, which lead to strong suspicion of the existence of gangrene; their presence renders the operation improper, their absence in like manner proves its propriety. Mr. Key considers the fœtor produced by transudation of the contents of the intestine, sometimes perceived after the completion of the external incision, as a positive proof of confirmed gangrene. It is unquestionably a sufficient reason for freely opening the sac, but we doubt its being an infallible indication of the death of the viscus. Such transudations are common in the rectum, giving to anal fistulæ and abscesses a stercoraceous smell, even when they do not communicate with the canal, and there is no reason why they should not take place, under similar circumstances, in hernia. We even think that we have perceived this smell in a sac containing a living portion of intestine.

Having thus examined the general grounds on which he advocates the operation of Petit, Mr. Key proceeds to give the results of his own experience.

His two first cases were inguinal hernia. Want of practice in the operation, and the imperfections of the common director, foiled him—he opened the sac in the first case by accident, and in the second by necessity. Both patients died of peritoneal inflammation. His third trial was made on an umbilical hernia and succeeded. Then follows three cases of femoral hernia, one of them complicated with consequent erysipelas, all terminating happily. He gives no other cases of inguinal hernia, and but one of omphalocele, which last was entirely successful under very disadvantageous circumstances.

His remarks upon the steps of the different operations are interesting and important. In the femoral hernia he dissects down on the neck of the sac, carrying his incision upward so as to expose the surface of the tendon covering the abdominal canal, which he enters by a very small incision made through the tendon just above the external ring; through this he passes his director downward, so as to ascertain if stricture exists there, and if so he dilates it from within by his bistoury. He then reverts the director, examines if there is stricture at the neck of the sac, and if so, he extends his incision in the canal until he exposes the lower edges of the muscles, in order to enable him to reach the stricture with ease, repasses his director and proceeds to dilate it. In umbilical hernia he generally lays bare the linea alba and the neck of the sac, exposing the latter as little as possible, makes a very small orifice in the tendons a little above the stricture, passes the director downward to the constricting edge, and thus divides it.

The director employed by Mr. Key is broader and more flat than usual, with a well-rounded point to prevent injury to the peritoneum.

The work is illustrated by three plates displaying the parts interested, and the position of the director, in the operations for the three principal classes of hernia.

In quitting the subject we have only to add that the style is plain and clear, and the facts stated interesting even to those whose minds are settled on all the controverted points advanced in the memoir.

R. C.

XXI. *A Treatise on the Venereal Disease and its Varieties.* By WILLIAM WALLACE, M. R. I. A., &c. &c. &c., Surgeon to the Jervis street Infirmary, Dublin; and to the Infirmary established in that City for the Treatment of Cutaneous Diseases, including Venereal Diseases. London, 1833. oct. pp. 382.

In the preparation of this treatise, Dr. Wallace professes to have divested his mind of the shackles of authority, and to have investigated venereal affections *de novo*. He commenced this plan so long ago as 1819, when his opportunities of observation were extended by his election as surgeon to the Jervis street Infirmary in Dublin. He informs us that, during the earlier period of this investigation, a system of treatment least likely to interfere with the operations of nature, was as far as possible adopted, with the object of acquiring a knowledge of the natural history of the disease—the local applications being, in general, lint wet with water, and, when necessary to prevent evaporation, covered with oiled silk, or with a pledget of wax ointment. All constitutional remedies, except mild laxatives, were avoided, unless when the patient's safety required, from the supervention of alarming symptoms, more active measures; and these were then employed in conformity to the general principles of medicine and surgery, totally abstracting from consideration every idea of the disease possessing specific characters or requiring a specific course of treatment. After this practice had been pursued for a sufficient time to fulfil the objects in view, various other modes of treatment, suggested by previously acquired knowledge of the advantages and disadvantages of mercury, were tried. The results of these plans, as obtained by the author, are set forth in the treatise under notice.

Nothing shows more clearly the embarrassment existing in regard to the cause of venereal affections, than the extremely various opinions maintained upon the subject by pathologists. Thus, whilst some suppose that the variety of symptoms resulting from promiscuous intercourse, are so dissimilar as only to be accounted for by presuming the existence of a plurality of venereal poisons, each causing its own specific effects; many are of opinion that one specific virus is sufficient to induce to all the symptoms; others again maintain that there is no necessity for admitting the existence of even one distinct poison, the effects produced by common irritants or morbid secretions giving rise to the various symptoms, according to modifying influences of structure, and other natural or accidental circumstances.

Dr. Wallace disbelieves in the existence of distinct venereal poisons, but holds in the existence of one specific virus, which he maintains gives rise to results palpably different from those of ordinary morbid secretions or common ir-